



Computer Programming Lab

COE 211

Fall 2022

Lab session: 2

Instructor: Christophe El-Khoury

Exercise 1 - Basic Calculator: Addition

Compensation: 25% of the grade

Requirements

Write a piece of code whose job is to print out the addition of two integers inputted by the user.

- * Create a class called `Add`

- * When executing the code, it will ask the user to:

 - Input the first number:

 - Input the second number:

- * Example of the output: `5+2=7`

Solution

```
import java.util.Scanner;

public class Add {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        System.out.print("Input the first number: ");
        int num1 = scan.nextInt();

        System.out.print("Input the second number: ");
        int num2 = scan.nextInt();

        scan.close();

        int result = num1+num2;

        System.out.println(num1 + "+" + num2 + "=" + result);
    }
}
```

Exercise 2 - Basic Calculator: Subtraction

Compensation: 25% of the grade

Requirements

Write a piece of code whose job is to print out the subtraction of two integers inputted by the user.

- * Create a class called `Subtract`

- * When executing the code, it will ask the user to:

 - Input the first number:

 - Input the second number:

- * Example of the output: $5-2=3$

Solution

```
import java.util.Scanner;

public class Subtract {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        System.out.print("Input the first number: ");
        int num1 = scan.nextInt();

        System.out.print("Input the second number: ");
        int num2 = scan.nextInt();

        scan.close();

        int result = num1-num2;

        System.out.println(num1 + "-" + num2 + "=" + result);
    }
}
```

Exercise 3 - Basic Calculator: Multiplication

Compensation: 25% of the grade

Requirements

Write a piece of code whose job is to print out the multiplication of two integers inputted by the user.

- * Create a class called `Multiply`

- * When executing the code, it will ask the user to:

 - Input the first number:

 - Input the second number:

- * Example of the output: `5*2=10`

Solution

```
import java.util.Scanner;

public class Multiply {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        System.out.print("Input the first number: ");
        int num1 = scan.nextInt();

        System.out.print("Input the second number: ");
        int num2 = scan.nextInt();

        scan.close();

        int result = num1*num2;

        System.out.println(num1 + "*" + num2 + "=" + result);
    }
}
```

Exercise 4 - Basic Calculator: Division

Compensation: 25% of the grade

Requirements

Write a piece of code whose job is to print out the division of two integers inputted by the user.

- * Create a class called `Divide`

- * When executing the code, it will ask the user to:

 - Input the first number:

 - Input the second number:

- * Example of the output: $5/2=2$

- * *Bonus (10%): If the user inputs 2 numbers whose division results in a decimal number, the decimal number should be printed*

Solution

```
import java.util.Scanner;
public class Divide {
    public static void main(String args[]) {

        Scanner scan = new Scanner(System.in);
        System.out.println("Input the first number: ");
        int a = scan.nextInt();
        System.out.println("Input the second number: ");
        int b = scan.nextInt();

        if(a%b == 0) {
            System.out.println( a + "/" + b + "=" + (a/b) );
        } else {
            double e = a/(double)b;
            System.out.println( a + "/" + b + "=" + (a/(double)b) );
        }

    }
}
```

Submission Instructions

1. Create **ONE** file with the following name structure:
FirstName_LastName_StudentID.java
2. Include 2 classes in that file
 - a. `public class Add { }`
 - b. `public class Subtract { }`
 - c. `public class Multiply { }`
 - d. `public class Divide { }`
3. Save the file
4. Confirm the name of the file follows the structure in point #1
5. Attach the file in an email addressed to: **christopheelkhoury@gmail.com**
6. Email Subject: **COE 211 - Friday 4 Section - Lab 2**